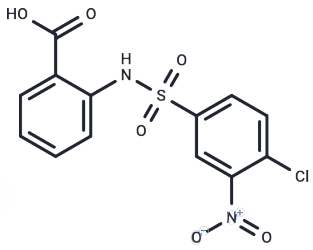
Data Sheet (Cat.No.T8732)

TargetMol

CTPI-2

Chemical Properties



CAS No. : 68003-38-3

Formula: C13H9ClN2O6S

Molecular Weight: 356.74

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	CTPI-2 is an inhibitor of mitochondrial citrate carrier SLC25A1 with(KD : 3.5 μM). CTPI-2 inhibits glycolysis, PPARγ, and its downstream target the glucose transporter GLUT4. CTPI-2 exhibits anti-tumor activity.CTPI-2 halts salient alterations of NASH reverting steatosis, preventing the evolution to steatohepatitis, reducing inflammatory macrophage infiltration in the liver and adipose tissue, and starkly mitigating obesity induced by a high-fat diet.
Targets(IC50)	Mitochondrial Metabolism
In vivo	CTPI-2, halts salient alterations of NASH reverting steatosis, preventing the evolution to steatohepatitis, reducing inflammatory macrophage infiltration in the liver and adipose tissue, while starkly mitigating obesity induced by a high-fat diet.?These effects are differentially recapitulated by a global ablation of one copy of the Slc25a1 gene or by a liver-targeted Slc25a1 knockout, which unravel dose-dependent and tissue-specific functions of this protein.?Mechanistically, through citrate-dependent activities, Slc25a1 inhibition rewires the lipogenic program, blunts signaling from peroxisome proliferator-activated receptor gamma, a key regulator of glucose and lipid metabolism, and inhibits the expression of gluconeogenic genes.?The combination of these activities leads not only to inhibition of lipid anabolic processes, but also to a normalization of hyperglycemia and glucose intolerance as well[1].

Solubility Information

Solubility	DMSO: 250 mg/mL (700.79 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (5.61 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.8032 mL	14.0158 mL	28.0316 mL
5 mM	0.5606 mL	2.8032 mL	5.6063 mL
10 mM	0.2803 mL	1.4016 mL	2.8032 mL
50 mM	0.0561 mL	0.2803 mL	0.5606 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Tan M, et al. Inhibition of the mitochondrial citrate carrier, Slc25a1, reverts steatosis, glucose intolerance, and inflammation in preclinical models of NAFLD/NASH. Cell Death Differ. 2020;27(7):2143-2157.
Peng R , Zhang M , Wang H , et al. Advances into Understanding the Vital Role of the Mitochondrial Citrate Carrier (CIC) in Metabolic Diseases, A Review[J]. Pharmacological Research, 2020:105132.